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TITLE: Ring transformation of heterocycles: Part 3. A conversion of 4-amino- $\Delta$ 2-1,2,4-oxadiazolines into 2-arylamino-1,3,4-thiadiazoles and oxa-analogs

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LANGUAGE: English

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GI For diagram(s), see printed CA Issue.

AB 4-Amino- $\Delta$ 2-1,2,4-oxadiazolines (I, R = C<sub>6</sub>H<sub>4</sub>X, X = m-, p-NO<sub>2</sub>, m-, p-Cl, n = 4,6,7, R' = H) are transformed into the corresponding 2-arylamino-1,3,4-oxadiazoles (II) or thiadiazoles (III) via reaction with Ph isocyanate (or Ph isothiocyanate), followed by brief treatment of the resulting adducts (I, R' = CONHPh and CSNHPH) with trifluoroacetic anhydride at ambient temperature. Treatment of I with trifluoroacetic anhydride gave 2-trifluoromethyl-1,3,4-oxadiazoles.

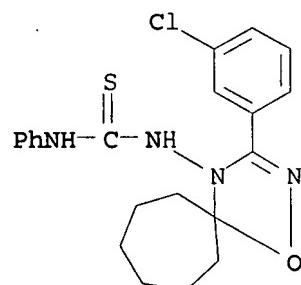
IT 156360-52-0P 156360-53-1P 156360-54-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with trifluoroacetic anhydride)

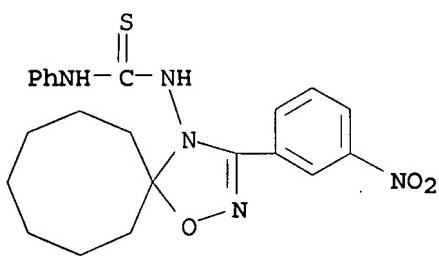
RN 156360-52-0 CAPLUS

CN Thiourea, N-[3-(3-chlorophenyl)-1-oxa-2,4-diazaspiro[4.6]undec-2-en-4-yl]-N'-phenyl- (9CI) (CA INDEX NAME)



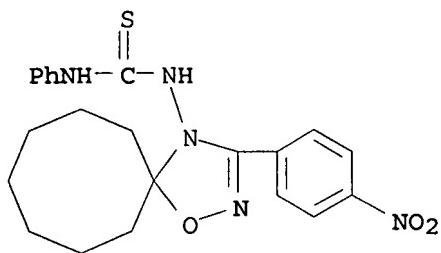
RN 156360-53-1 CAPLUS

CN Thiourea, N-[3-(3-nitrophenyl)-1-oxa-2,4-diazaspiro[4.7]dodec-2-en-4-yl]-N'-phenyl- (9CI) (CA INDEX NAME)



RN 156360-54-2 CAPLUS

CN Thiourea, N-[3-(4-nitrophenyl)-1-oxa-2,4-diazaspiro[4.7]dodec-2-en-4-yl]-N'-phenyl- (9CI) (CA INDEX NAME)



IT 156360-48-4P 156360-49-5P 156360-50-8P

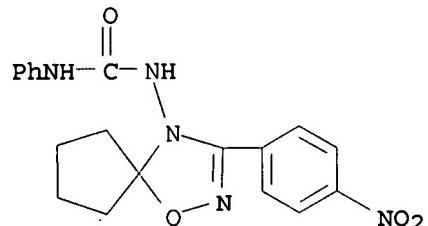
156360-51-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reactions of, with Ph isocyanate and trifluoroacetic anhydride)

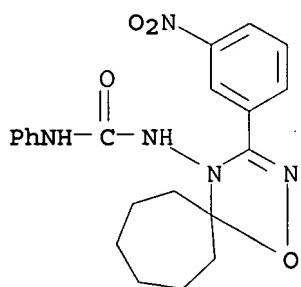
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CN Urea, N-[3-(4-nitrophenyl)-1-oxa-2,4-diazaspiro[4.4]non-2-en-4-yl]-N'-phenyl- (9CI) (CA INDEX NAME)



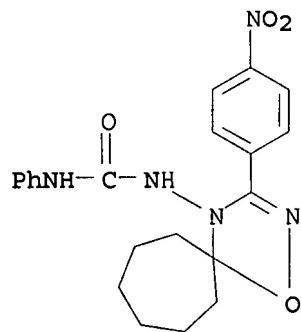
RN 156360-49-5 CAPLUS

CN Urea, N-[3-(3-nitrophenyl)-1-oxa-2,4-diazaspiro[4.6]undec-2-en-4-yl]-N'-phenyl- (9CI) (CA INDEX NAME)



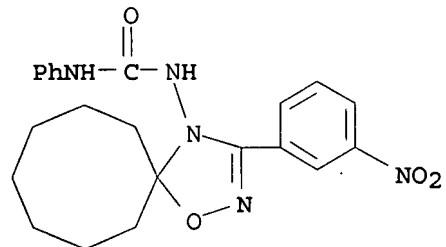
RN 156360-50-8 CAPLUS

CN Urea, N-[3-(4-nitrophenyl)-1-oxa-2,4-diazaspiro[4.6]undec-2-en-4-yl]-N'-phenyl- (9CI) (CA INDEX NAME)



RN 156360-51-9 CAPLUS

CN Urea, N-[3-(3-nitrophenyl)-1-oxa-2,4-diazaspiro[4.7]dodec-2-en-4-yl]-N'-phenyl- (9CI) (CA INDEX NAME)

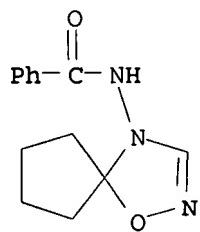


IT 156360-59-7 156360-60-0 156360-61-1

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with trifluoroacetic anhydride)

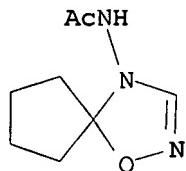
RN 156360-59-7 CAPLUS

CN Benzamide, N-1-oxa-2,4-diazaspiro[4.4]non-2-en-4-yl- (9CI) (CA INDEX NAME)



RN 156360-60-0 CAPLUS

CN Acetamide, N-1-oxa-2,4-diazaspiro[4.4]non-2-en-4-yl- (9CI) (CA INDEX  
NAME)



RN 156360-61-1 CAPLUS

CN Formamide, N-1-oxa-2,4-diazaspiro[4.4]non-2-en-4-yl- (9CI) (CA INDEX  
NAME)

